MODEL 163

	Connection and use of test equipment		AD00.00-P-1000AZ
	Instrument cluster diagnosis, previous knowledge		AD54.30-P-2000GH
	Explanatory notes on diagnosis troubleshooting chart IC		AD54.30-P-5000-01GH
	Display instruments controlled via CAN troubleshooting chart IC		AD54.30-P-5000-02A
	Display instruments controlled directly, troubleshooting chart IC		AD54.30-P-5000-03A
	Troubleshooting		
Complaint	**Possible cause**	**Notes**	**Remedy/Test step**
Instrument cluster (A1) completely inoperative	Voltage supply, instrument cluster (A1)		AD54.30-P-6000-01GH
Malfunction indicator lamps or indicator lamps inoperative	Voltage supply, instrument cluster (A1)		AD54.30-P-6000-01GH
HHT and instrument cluster cannot communicate	Cables, instrument cluster (A1)		AD54.30-P-6000-02GH
Low brake fluid level/parking brake indicator lamp, brake pad wear indicator lamp, ABS MIL, malfunction indicator lamp (ETS, ASR, ESP) come on together and speedometer remains on lower stop.	Traction system control module (N47)		AD42.35-P-1001BZ
RPM counter, engine coolant gauge remain on the lower stop and the low engine oil level indicator lamp comes on.	Injection system control module (N3)		AD07.61-P-1000AZ
Low brake fluid level/parking brake indicator lamp, brake pad wear indicator lamp, low engine oil level indicator lamp, ABS MIL, malfunction indicator lamp (ETS, ASR, ESP) come on together and RPM counter, engine coolant gauge and speedometer remain on lower stop.	CAN faulty		AD54.30-P-6000-04GH AD54.30-P-6000-05GH
Steering lock warning lamp (A1e40) is continuously illuminated or is inoperative.	Cables, steering lock switch (S97/1)		AD54.30-P-6000-06GH
Coolant level indicator disrupted	Cables, Coolant level indicator electronic switch (S41)	Model 163 as of 3.98	AD54.30-P-6000-42GH